U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION II
290 Broadway, 22nd Floor
New York, New York 10007-1866

5/12/2011

Karla J. Harre, PE
Supervisory Environmental Engineer
Technology Applications Branch
Environmental Restoration Department
NAVFAC Engineering Service Center
1100 23rd Avenue
Port Hueneme, CA 93043

Re: Review of Draft Optimization Team Report for the Bethpage Groundwater Plume Remedy, dated April 29, 2011:

Dear Ms. Harre:

EPA Region 2 has reviewed the Navy's Draft Optimization Team Report for the Bethpage Groundwater Plume Remedy, dated April 29, 2011. Overall, it is a well-executed report which provides a good basis for discussing and planning the steps needed to verify the effectiveness of the current remedial actions. Our comments are as follows:

1. I have attached a comment memo from Rob Alvey, the EPA geologist involved in this project. I concur with the four comments noted in the attached memo from Mr. Alvey.

2. Background (page 1) - Regarding the discussion on the first two paragraphs about the formation of the optimization team, perhaps one or more sentences could be added to describe how the optimization review normally falls into the remediation process. For instance, is there a criteria that can be cited under the Navy's environmental remediation guidance, which specifies the optimization review process? If the optimization process is similar to EPA's 5-year review process for Superfund remedies, my understanding is that it probably would have been planned regardless of whether concern was voiced by U.S. Senator Charles Schumer's office.

3. As the optimization review evaluates the conclusions of the ROD issued in January 2003, it would be useful if more specific reference to recommendations of the ROD were noted. For instance, in the portion of the ROD summary pertaining to the *Groundwater Remedial Program* (p.3), the ROD recommends "additional groundwater investigation in the vicinity of well GM-75D2, or other areas identified as requiring additional groundwater investigation …. to further determine if a contaminant mass removal program similar to the GM-38 area, is necessary". The optimization report states in Section 4.0 (Evaluation of the On-Site Remedy)

recommendation #3, that "source remediation (aggressive in-situ treatment of DNAPL sources) above and beyond the On-Site Containment System in the Western Plume source areas is not recommended." Although I assume that this statement applies to the GM-75D well cited in the ROD, it would be helpful for the lay reader if the optimization report were to indicate whether GM-75D was among the wells included in this category.

4. Perhaps there can be further clarifications in Section 5 (Evaluation of Remedy for Off-Site Hot Spot and Plume). Recommendation #1 (page 10) states that "geologic heterogeneities, etc., will likely make large-scale, rapid restoration of groundwater plume to pre-plume conditions impossible" within 20 to 30 years. Whereas recommendation #5 on page 12 proposes the evaluation of "a containment and treatment system… at the current leading edge of the plume to prevent further plume expansion and impacts to currently non-affected public water supply wells." According to recommendation #5, this could be done by "operating them [affected water supply wells] at full capacity year round". It would be helpful if further explanation were given regarding whether or not gearing up the pumping in the vicinity of the affected water supply treatment systems should be able to remediate the aquifer to drinking water concentrations at a distance downgradient. Or, if downgradient water supply wells would still need treatment, would there be value to significantly gearing up the pumping of the affected Aqua NY and S. Farmingdale wells? Also, if it is not beyond the scope of this assignment, perhaps there could be a discussion/ recommendation of where the additional pumped water from the supply wells could be discharged if pumping were done at full capacity year round.

Thank you for the opportunity to comment. If you should have any questions, please feel free to contact me at (212) 637-4181.

Sincerely,

Carol A. Stein, P.E.
Environmental Engineer,
RCRA Programs Branch
EPA Region 2

Attachment

cc:Lora Fly, US Navy
Stephen Scharf, NYSDEC

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION II
Emergency and Remedial Response Division
Program Support Branch
290 Broadway, 18th Floor
New York, New York 10007-1866
212 -637-3258

Date: May 11, 2011

To: Carol Stein

From: Rob Alvey

Subject: Draft Remedy Optimization Team Report for the Bethpage Groundwater Plume Remedy

I have completed a review of the April 29, 2011 draft Remedy Optimization Team Report concerning the Bethpage groundwater contamination. The report was prepared by a "Technical Team" for the optimization of the Bethpage Plume Remedy at the request of Naval Facilities Engineering Command Mid Atlantic. In my opinion, the draft report provides a very good basis for discussion and planning on steps needed to verify the effectiveness of the current remedial actions. I note that the Technical Team also states agreement with the general assessment of the USGS's technical memorandum (report) on the groundwater model.

I have no significant comments or edits suggested for the draft. There are 4 items that I suggest be considered for follow-up:

1. Full characterization of contaminated groundwater ultimate extent. The optimization addresses the potential impact to public supply wells, but does not fully discuss the ultimate extent to which the groundwater contamination can be expected to reach. There is a data gap as to if it will ultimately discharge to the shore or if natural resource damage is anticipated.
2. The western edge of the plume is somewhat uncertain, and includes an area under the responsibility of the Hooker/Ruco Polymers Superfund Site. I suggest a copy of the optimization report be provided to the EPA RPM and a meeting held to develop a workplan to firmly establish the impacted area from Hooker/Ruco and better delineate specifically what part of the impacted groundwater is being addressed by this PRP under Superfund.
3. The draft report contains indications that the On-Site containment may not be fully effective. This needs to be addressed immediately so that further migration of VOCs from this area does not occur.
4. The Eastern edge of the impacted groundwater needs to be better delineated.

Currently, both the Hooker/Ruco and Navy are conducting additional drilling and well installation. Oversight by EPA/NYSDEC is needed so that we all can get and share the data as it is obtained. I have requested a task to USGS under the Interagency Agreement to assist with an

on the ground presence and data collection, but need to know from Navy and Hooker/Ruco more specifics of the current and planned work and whether NYSDEC is providing any oversight.